

PATENT**ABSTRACT**

1           In one aspect the plasma lamp according to the present invention  
2   comprises a gas envelope that is constructed from ceramic material and  
3   a sapphire window rather than quartz. According to another aspect of  
4   the present invention, a plasma lamp comprises an RF structure for the  
5   radio wave radiation and an envelope for housing the excitation gas that  
6   are formed so as to constitute a single, integrated ceramic structure.  
7   According to yet another aspect of the present invention, the plasma  
8   lamp comprises a waveguide structure having solid material such as  
9   ceramic rather than air for the dielectric and a gas housing made of a  
10   combination of solid ceramic and a sapphire window. In this way, the  
11   separate quartz gas envelope and air-filled waveguide structure  
12   employed in the prior art are replaced by a single, integrated structure.

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